FIG. **5**B illustrates the tree **500** with grandchildren nodes "cab" and "cyc" promoted to become children nodes of input sequence node "c." Their subtrees are moved along with the promoted nodes. After promoting node "cyc," the weight of node "cyc" is subtracted from the weight of node "cy." If the updated weight of node "cy" does not satisfy the usage frequency criteria, then the node "cy" and its subtree are removed, as shown in FIG. **5**C, leaving nodes "ca," "cab," and "cyc" as the children nodes of node "c." If no more nodes are promoted or removed, the character sequences "ca," "cab," and "cyc," corresponding to the children nodes of the input sequence node, are sorted by usage frequency weight and at least one of them are presented to the user in the sorted order.

[0067] As described above, during process flow **300**, a list of children nodes that satisfy the usage frequency criteria may be stored in the memory and manipulated, rather than modifying the usage frequency tree **146**. FIGS. **7**A-**7**C illustrate lists of children nodes corresponding to the tree **500** in FIGS. **5**A-**5**C above. In FIG. **7**A, the list **700** includes node pointer-weight pairs for nodes "ca" and "cy," which are the children nodes of the tree **500** in FIG. **5**A that satisfies the usage frequency criteria. When nodes "cab" and "cyc" are promoted as shown in FIG. **5**B, pointers to these nodes and their weights are added to the list **700**, as shown in FIG. **7**B. Also within the list, the weight of node "cab" is subtracted from the weight of node "ca" and the weight of node "cyc" is subtracted from the weight of node "cy." When node "cy" is removed from the tree **500** based on its updated weight as shown in FIG. **5**C, its pointer and weight is removed from the list **700** as well, as shown in FIG. **7**C.

[0068] If the user is presented with the sequence "cyc" and the user selects it, the input sequence becomes "cyc" and a new character sequence tree **502** (FIG. **5**D) is identified. Tree **502** is similar to tree **500** except that the nodes "ca" and "cab" and their subtrees are not in the tree **502** because their corresponding character sequences are no longer possible extensions of the input sequence, given the current input sequence "cyc." Thus, tree **502** only includes the subtree descending from the new input sequence node "cyc." From here, children nodes of "cyc" may be removed and grandchildren nodes may be promoted in accordance with the process described above.

[0069] FIGS. **6**A-**6**B illustrate a graphical user interface for entering text on a portable electronic device in accordance with some embodiments. The portable device **200** may include a memo pad application, email client application, Short Message Service (SMS) application, address book application, word processing application, presentation application, or other application with text entry **602**, where the user can enter text for storage in the memory of the device. Some or all of these applications may share the same text entry user interface. The user may input text **604** into the application using the click wheel **210** and the click wheel button **208**. In the text **604**, the input sequence "c" is highlighted, indicating that the sequence "c" is incomplete. The memo pad application may provide suggestions for completing the input sequence in a menu **606**, which the user may navigate through using the click wheel **210** and the click wheel button **208**. In some embodiments, the menu includes three sets of suggestions. The first set **608** includes the current input sequence followed by a whitespace. Selection of this suggestion completes the current input sequence and starts a new one. The second set **610** includes character sequences selected in accordance with the process described above in relation to FIGS. **3**A-**3**B. The members of the second set are all partial words, since completed words are represented by the trailing white space in this example. The second set may be omitted if no candidate character sequences were selected in accordance with process flow **300** described above. In some other embodiments, the first and/or the third sets may be omitted.

[0070] The third set **612** includes a plurality of character sequences. Each of these sequences includes the input sequence followed by a letter of the alphabet. There is one sequence for each letter of the alphabet. Thus, for the English alphabet, there are 26 sequences in the third set, one sequence for each alphabet letter. In some other embodiments, additional sets of suggestions, such as the input sequence followed by numbers and/or common punctuation marks and/or common symbols, may be shown.

[0071] When the user selects a suggestion from the menu **606**, the input sequence is updated. On the display **212**, the original input sequence is replaced with the suggestion selected by the user. Additionally, the menu **606** is updated with new suggestions based on the updated input sequence. As described above, there may be three sets of suggestions. The first set includes the input sequence followed by a whitespace. The second set includes sequences selected based on the updated input sequence and in accordance with process flow **300** described above in relation to FIGS. **3**A-**3**B. Again, the second set may include complete and/or partial words. The third set includes the current input sequence followed by each letter of the alphabet.

[0072] FIGS. **6**A-**6**C illustrate an example of the updating of the menu **606** based on the user's selections. In FIG. **6**A, the string "ca" is highlighted as the user selection to further complete the current input sequence "c." In FIG. **6**B, "ca" is the (updated) current input sequence. The first set **608** is updated to include the sequence "ca". The second set **610** is updated to include suggestions, such as the partial words "calen" and "carto," that have the current input sequence "ca" as a prefix. The third set **612** is updated to include concatenations of the current input sequence "ca" and letters of the alphabet. If the suggestion "calen" is highlighted and selected by the user, as shown in FIG. **6**B, the input sequence is updated to become "calen," as shown in FIG. **6**C. The first set **608** is updated to include the sequence "calen". The second set **610** is updated to include suggestions, such as the partial words "calenda" and "calende," that have the current input sequence "calen" as a prefix. The third set **612** is updated to include concatenations of the current input sequence "calen" and letters of the alphabet.

[0073] The foregoing description, for purpose of explanation, has been described with reference to specific embodiments. However, the illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the invention and its practical applications, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

1. A computer-implemented method, comprising:

receiving an input sequence of one or more characters;

identifying one or more candidate sequences that satisfy predefined usage frequency criteria with respect to the input sequence, each candidate sequence comprising a